ELSEVIER

Volume 460, Numbers 1–2, 18 January 1999

JOURNAL OF ELECTROANALYTICAL CHEMISTRY

Contents

1799–1999: Alessandro Volta's 'Electric Pile'
Two hundred years, but it doesn't seem like it
S. Trasatti 1

Review

Electron transfer in retrospect and prospect
I: Adiabatic electrode processes
N.S. Hush 5

Regular Articles

Hydrogen electrosorption in Ni–Pd alloys
M. Grdeń, A. Czerwiński, J. Golimowski, E. Bulska, B. Krasnodebska-Ostrega, R. Marassi, S. Zamponi 30

Factors influencing the ion-exchange preconcentration and voltammetric behaviour of redox cations at polyestersulfonated ionomer coated electrodes in acetonitrile solutions
B. Brunetti, P. Ugo 38

The electrochemical properties of a series of phenylene-thienyl polymers in tetramethylene sulfone based electrolytes
W.S. Schlindwein, Y. Gofer, H. Sarker, T.O. Poehler, P.C. Searson 46

Steady-state ion transport through homopolar ion-exchange membranes: an analytical solution of the Nernst–Planck equations for a 1:1 electrolyte under the electroneutrality assumption
P. Sistat, G. Pourcelly 53

Transfer matrix method for the electrochemical impedance of inhomogeneous porous electrodes and membranes
P.H. Nguyen, G. Paasch 63

In situ and model EXAFS studies of electrocatalysts for methanol oxidation
R.A. Lampitt, L.P.L. Carrette, M.P. Hogarth, A.E. Russell. 80

Electrochemical treatment of tumours: a simplified mathematical model
E. Nilsson, J. Berendson, E. Fontes 88

Activity coefficients of $Al(ClO_4)_3$ in aqueous solutions: a reexamination
M. Molero, D. González-Arjona, J.J. Calvente, G. López-Pérez 100

Feasibility studies for the detection of volatile organic compounds in the gas phase using microelectrode sensors
P.A. Mosier-Boss, S.H. Lieberman 105

Electrochemical oxidation in different media of bis(*p*-phenylene crown ether) as a symmetrical molecule bearing two identical redox centers
B. Fabre, J.-P. Desvergne, M. Colomès, J. Simonet 119

A non-primitive model for the electrode | electrolyte interface based on the Percus–Yevick theory. Analysis of the different molecular sizes, ion valences and electrolyte concentrations
S. Lamperski, C.W. Outhwaite 135

A model for assisted ion transfer across liquid | liquid interfaces
W. Schmickler 144

Simultaneous ion transfer across the microhole ITIES: an example of ternary electrodiffusion
B. Quinn, R. Lahtinen, L. Murtomäki 149

Electrochemical reduction of phenyl-substituted cyclopentadienes: a case of an 'indirect father–son' self-protonation process
G. Farnia, F. Marcuzzi, G. Sandonà 160

Synthesis, electropolymerization and electrochemical characterization of some new acrylate substituted thiophene derivatives
E. Lankinen, G. Sundholm, P. Talonen, H. Granö, F. Sundholm 176

In situ infrared study of cytosine adsorption on gold electrodes
K. Ataka, M. Osawa 188

Experimental and calculated complex formation curves for mixed, dynamic and semi-dynamic, metal–ligand systems. A differential pulse polarographic study of Cu^{II}–sarcosine–OH and Cd^{II}–MIDA–OH systems at a fixed ligand to metal ratio and varied pH
I. Cukrowski 197

Elsevier Science S.A.

Catalytic reduction of 1,8-diiodooctane by electrogenerated cobalt(I) salen and formation of μ-(1,8-*n*-octyl)-bis[(salen)cobalt(III)]
K.S. Alleman, D.G. Peters . . . 207

Capacitance and photocurrent study of electronic properties of anodic oxide films on Nb and Ta. Evaluation of the ionized donor concentration profile in Nb_2O_5 film
A.D. Modestov, A.D. Davydov . . . 214

Discontinuous immitance due to a saddle node bifurcation:
II Tangent bifurcation and critical slowdown during isotherm branch switching
F. Berthier, J.-P. Diard, C. Montella . . . 226

Renewable silica sol–gel derived carbon composite based glucose biosensor
J. Li, L.S. Chia, N.K. Goh, S.N. Tan . . . 234

Short Communications

Oligomeric poly(phenazine-2,7-diyl) and its electrochemical response
T. Yamamoto, T. Okuda . . . 242

Electrochemical and spectroelectrochemical properties of manganese reconstituted myoglobin
I. Taniguchi, C. Li, M. Ishida, Q. Yao . . . 245

Structural changes at the Pt(100) surface with a great number of potential cycles
N. Furuya, M. Ichinose, M. Shibata . . . 251

Light scattering of polyaniline films responding to electrochemical switching
K. Aoki, Y. Teragishi, M. Tokieda . . . 254

Enhancement of the electrocatalytic O_2 reduction on Pt–Fe alloys
T. Toda, H. Igarashi, M. Watanabe . . . 258

Cyclic voltammetric studies of Prussian blue and viologens within a paper matrix for electrochromic printing applications
R.J. Mortimer, C.P. Warren . . . 263

Mechanical resonance effects in electroactive polycarbazole films
R. Saraswathi, A.R. Hillman, S.J. Martin . . . 267

Corrigendum . . . 273

Author Index of Volume 460 . . . 275

Subject Index of Volume 460 . . . 277

CONTENTS DIRECT

This journal is part of **ContentsDirect**, the *free* alerting service which sends tables of contents by e-mail for Elsevier Science books and journals. The quickest way to register for **ContentDirect** is via the World Wide Web at: **www.elsevier.nl/locate/ContentsDirect**
If you don't have access to the WWW you can register for this service by sending an e-mail message to cdsubs@elsevier.co.uk specifying the title of the publication you wish to register for. The tables of contents are also available on the Elsevier Science website at: www.elsevier.nl or www.elsevier.com or www.elsevier.co.jp

Now Available On

http://ChemWeb.com
The World Wide Club for the Chemical Community
http://chemweb.com/gateways/elsevier.html